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Cooperative Farm Machinery Operations, 1970-80

Abstract

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Progress of cooperatives franchising farm machinery was evaluated, noting growth in sales, service, and net margins from 1970 to 1980. Cooperative dealer performance was measured by comparing machinery sales, operating margins, total expenses, and net margins with those of noncooperative farm machinery dealers of similar operation and sales volume. Cooperative dealers' operating problems were evaluated for 1980, compared with those of 1970. Case studies of failed operations were made to determine the general causes.

Key Words: Cooperatives, machinery dealers, management, performance, organization, service

Preface

The purpose of the study was to analyze the operations of cooperative franchise machinery dealers since 1970. Progress in cooperative dealer operations through 1980 was measured and evaluated in view of prevailing economic conditions. The main objective was to determine the extent of cooperative dealer operations in 1980, including sales and distribution, policies, services, and problems.

An analysis of factors affecting cooperative farm machinery operations could help cooperatives find ways to improve operations and increase machinery sales. It also could help regional cooperatives evaluate their role in supporting local cooperative dealers and guide local cooperatives interested in new services—including handling and servicing farm machinery and equipment.

Cooperatives franchising machinery provided information by mail. Managers, directors, and machinery department heads were interviewed personally at several cooperatives to determine problems, policies, and operating practices. Nonrespondents were contacted by telephone to complete the survey.

Efficiency of individual machinery operations was measured by comparing a firm's sales and cost data with information published by the independent dealers' association, National Farm and Power Equipment Dealers Association, St. Louis, Mo. The association surveys more than 1,200 dealers each year to determine sales, margins, expenses, and profits of individual operations. These data were combined and placed into sales volume groupings to obtain average performance.

Performance indicators were computed by dividing the dollar amount of each item by total sales to arrive at a percent figure. This figure is important, because it reflects a measure of operating efficiency. It provides a basis for accurate comparison, regardless of sales volume.

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Highlights

The number of farmer cooperatives franchising a full line of farm machinery declined from 101 in 1970 to 56 in 1980. Cooperative machinery sales increased from $36 million in 1970 to $106 million in 1980, at an average annual increase of 20 percent.

Five of the 56 cooperative dealers specialized only in farm machinery sales and service in 1980. About half the total were marketing cooperatives, with the remainder about equally divided between supply and combination supply and marketing cooperatives. In 1970, supply cooperatives represented more than half the 101 cooperative dealers.

Sales of new and used machinery and repair parts increased as a percent of total farm machinery sales from 1970 to 1980, while sales of other equipment decreased as percent of the total. New machinery accounted for about 53 percent, used machinery and repair parts about 19 percent each, other equipment 4 percent, and service receipts 5 percent of total machinery sales. In 1970, new machinery accounted for about 46 percent, used machinery sales 13 percent, repair parts 15 percent, other equipment 20 percent, and service receipts 6 percent of total machinery sales.

Farm machinery sales of cooperative dealers averaged 17 percent of their total cooperative sales of $626 million in 1980. Cooperatives with machinery sales of more than $3 million averaged about $20 million in total sales, while cooperatives with machinery sales of less than $1 million averaged total cooperative sales of about $7 million.

Cooperative dealers had net margins of $3.1 million on machinery sales of $105.6 million in 1980. The average cooperative dealer earned $55,000 on sales of $1.9 million. In 1970, the average cooperative dealer had margins of $2,870 on machinery sales of about $410,000.

Eleven cooperatives with more than $3 million in sales averaged margins of 2.5 percent of total sales, while their farm machinery departments earned 4 percent on machinery sales. The 4 percent earned exceeded the 3.8 percent net operating profit of larger, noncooperative machinery dealers in 1980.

Generally, though, average cooperative dealers' financial performance was about equal to that of average noncooperative dealers. Net margins of cooperative dealers at 2.92 percent slightly exceeded the 2.87 percent of sales for noncooperative dealers. Operating margins for cooperatives were somewhat higher at 15.43 percent of sales, compared with 15.39 for noncooperative dealers. Expenses were a little higher at 15.17 percent of sales for cooperative dealers, compared with 14.89 for noncooperative dealers.

Dealer competition declined from 1970 to 1980. The average number of dealers in the cooperatives' trade area fell from nine in 1970 to seven in 1980.

During this period, cooperative dealers expanded their trade area—sales beyond 20 miles from headquarters were 22 percent of total sales in 1980 and 19 percent in 1970.

To make progress, cooperatives had to weather many problems. External problems were more troublesome than internal ones. Major problems ranged from the greatest, meeting dealer competition in pricing, to the least troublesome, meeting dealer competition in service.

Half of cooperative machinery managers rated four areas of internal problems as sources of major problems and almost half as posing minor problems. These most troublesome internal problems were:

(1) hiring good employees,
(2) acquiring needed capital,
(3) financing machinery sales, and
(4) managing inventories.

By the end of 1983, half the cooperative machinery dealers operating in 1970 will be out of business, without continued improvement in coordinated management. A fourth had discontinued operations before 1975 when economic conditions were more favorable.

"Up front" factors of high interest rates, high facility and operating costs, and lower product demand often were cited as contributing to cooperative machinery failures. However, farm machinery managers interviewed reported management coordination problems affecting operations long before shutdown as the basic cause underlying business failure, citing examples of cooperative managers who:

- Did not understand the farm machinery business or subordinated it to other operations,
- Failed to delegate proper authority or failed to communicate responsibility to machinery managers, or
- Failed to share planning, budgeting, and operating guidelines with machinery managers.

From their own group, farm machinery managers also cited the inexperienced who misinterpreted communications or failed to assume authority and responsibility as contributing to failure.

Cooperative Farm Machinery Operations, 1970-80

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OVERVIEW

In the 1930's, several regional cooperatives combined resources to form National Farm Machinery Cooperative, Inc., to manufacture and distribute farm machinery. Local cooperative members of regionals in the Midwest formed machinery-manufacturing firms to increase product line and grew in manufacturing and sales volume, so more than 1,000 were distributing cooperative farm machinery before World War II.

Economic and facility requirements of the war limited machinery manufacture to priority national defense efforts. Whether through lack of coordination in sales or farmer preference for brand name machinery, National's progress was impeded and cooperative farm machinery never gained the promising potential exhibited before the war.

By 1950, Cockshutt, a Canadian firm, had acquired cooperative machinery-manufacturing facilities. Later, an American machinery manufacturer, Oliver, purchased the firm. This company was included in the consolidation of several long-line companies to form White, a major machinery-manufacturing company. About a fourth of the cooperatives handling farm machinery in 1980 were franchise dealers for White manufacturing company.

In 1970, 101 cooperatives franchised farm machinery for major U.S. manufacturers. By 1980, full-line cooperative franchise dealers had declined in number to 56. Their sales, however, were more than $100 million, compared with $36 million for the 101 cooperative dealers in 1970. Total cooperative sales for the 56 cooperatives passed the $600-million mark in 1980.

Five of the 56 cooperative franchise dealers specialized in farm machinery sales and service, devoting more than half their business to these lines. About half (25) of the remaining cooperatives handling farm machinery in

1980 were marketing cooperatives in which marketing amounted to more than half the total volume. The remainder was about equally divided between supply cooperatives, mainly selling feed, fertilizer, and petroleum to farmers, and combination supply/marketing cooperatives, with about an equal volume of both operations. In 1970, supply cooperatives represented more than half the 101 cooperatives franchising farm machinery.

Some 1,500 cooperatives also handled farmstead and light farm equipment in 1980. Equipment sales for these cooperatives exceeded $500 million, and together with cooperative franchise dealers' sales of more than $100 million, accounted for about 5 percent of all farmers' expenditures for farm machinery and equipment in 1980.

COOPERATIVE FARM MACHINERY SALES

Farmer cooperatives as a group handle farm machinery through franchises representing all major full-line manufacturers and main short-line manufacturers. More cooperative dealers franchise farm machinery manufactured by White, since it acquired the original cooperative line in a merger with several other manufacturing companies several years ago.

Sales and Service Income

Sales of new and used farm equipment, repair parts, and all other lines of farm machinery totaled $100 million in 1980. With shop and service income added, total volume was $105.6 million. In 1970, total sales of farm machinery and equipment, repair parts, and all other lines amounted to $34 million. With service labor added, total sales volume amounted to $36 million (table 1).

Sales of new and used machinery and repair parts increased as a percent of total sales from 1970 to 1980, while sales of other equipment decreased as a percent of the total. Breakdown of total sales for cooperative dealers in 1980 compared favorably with that of noncooperative machinery dealers reporting sales data to the national dealers association.

Noncooperative dealers reported new machinery sales averaged 52 percent, used machinery sales 18 percent, repair parts 18 percent, other lines 5 percent, lease-rental income 1 percent, and service labor 6 percent of average total sales of $2.3 million for 1980.

In 1970, new machinery sales averaged 46.4 percent of the $34-million total machinery volume. By 1980, more than half (53.4 percent) of the $1.9-

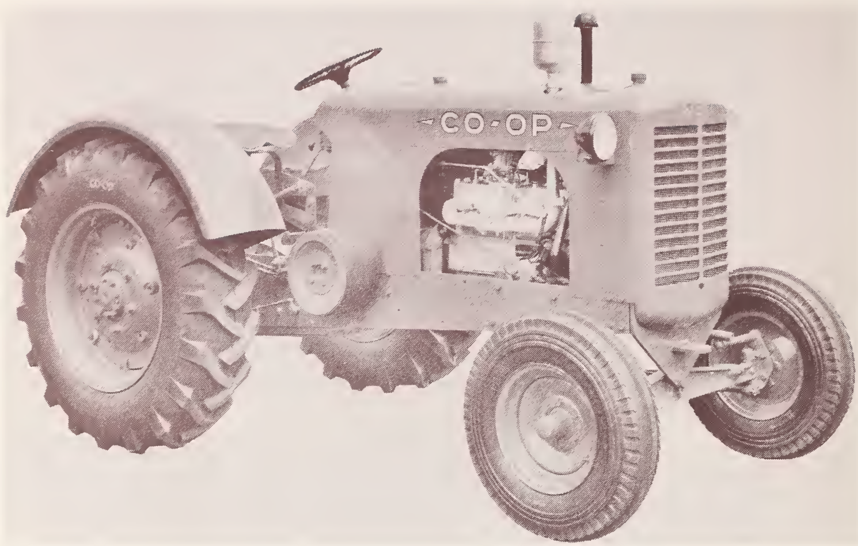
million average cooperative machinery sales volume came from sales of new farm machinery (table 1). Thus, cooperative dealers in 1980 averaged slightly more than $1 million in new farm machinery sales. Repair parts sales rose from $5.3 million in 1970 to $19.5 million in 1980, or from 14.6 to 18.5 percent of total sales. The average cooperative dealer had sales of $1.8 million, or 94.7 percent of the total, for machinery, parts, and other equipment in 1980. Including service labor of $100,000, or 5.3 percent of the total, machinery volume averaged $1.9 million.

Used machinery sales increased from $4.7 million in 1970 to $19.8 million in 1980, or from 13 to 18.8 percent of total sales. Used machinery sales picked up, mainly because cooperative dealers started shipping used machinery in wholesale lots to other areas or other parts of the country. Also, high machinery prices relative to farm commodity prices increased demand for used machinery.

Table 1—Total farm machinery sales of cooperative farm machinery dealers, 1970 and 1980

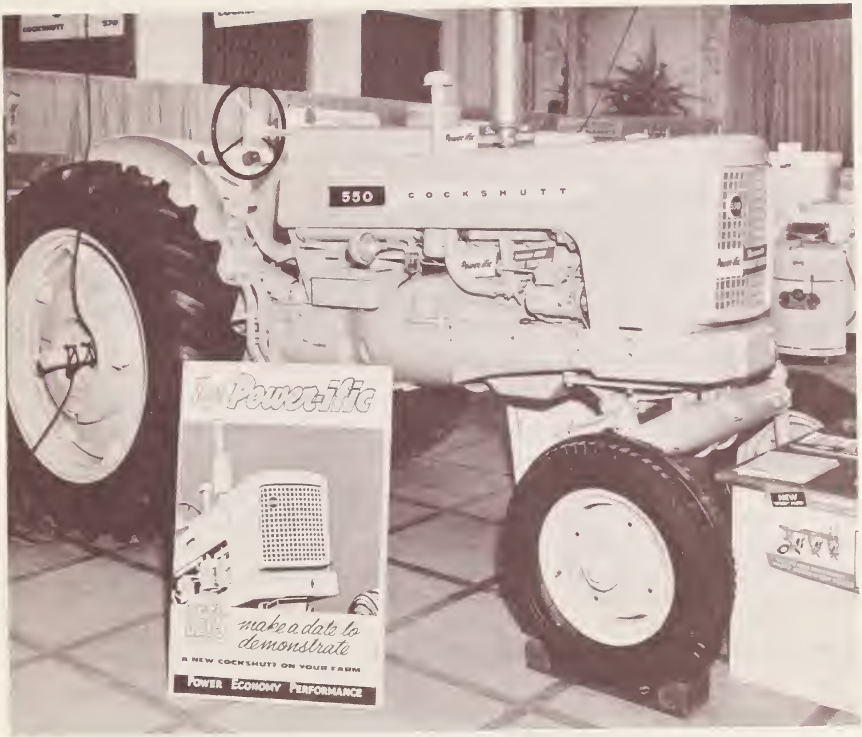
Item	1980 sales			1970 sales[1]		
	Total	Average	Items as percent of total	Total	Average	Items as percent of total
	1,000 dollars		*Percent*	*1,000 dollars*		*Percent*
New machinery	56,433	1,077	53.4	16,650	165	46.4
Used machinery	19,848	354	18.8	4,669	47	13.0
Repair parts	19,492	348	18.5	5,251	52	14.6
Other equipment	4,229	76	4.0	7,316	72	20.4
Subtotal	100,002	1,785	94.7	33,886	336	94.4
Service receipts	5,623	100	5.3	1,989	19	5.6
Total	105,625	1,885	100.0	35,875	355	100.0

[1]Lloyd C. Biser, *Cooperatives' Farm Machinery Operations*, FCS Information Report 86, July 1972.



Early co-op tractor manufactured by the National Farm Machinery Cooperative Inc. - 1940

A co-op cockshutt grain combine - 1960



A remodeled co-op tractor manufactured by the Canadian company which acquired the co-op line - 1950

Farm Machinery and Total Cooperative Sales

Farm machinery cooperatives may be grouped according to machinery sales volume (see table 2). In descending order, these categories are: those with sales volumes of more than $3 million, those in the $2 million to $3 million range, those in the $1 million to $2 million range, and those with less than $1 million (see table 2).

Farm machinery sales of $105.6 million for the 56 cooperatives amounted to 17 percent of total cooperative sales of $625.7 million in 1980. The 11 larger cooperatives, with more than $3 million in sales, averaged $4.3 million in machinery sales and $19.9 million in total sales. Thus, farm machinery sales of these cooperatives accounted for 22 percent of total sales. They averaged highest in total sales volume, because they sold farm supplies and marketed most of the grain and other crops for farmers in their trade areas.

Eleven cooperatives with machinery sales between $2 million and $3 million averaged $2.3 million in machinery sales, or 23 percent of total sales, averaging $9.6 million. This volume exceeds machinery sales of 22 percent of total sales for the larger machinery cooperatives (table 2).

Average total sales for cooperatives in the $2-million to $3-million sales range was less than average total sales for those in the $1-million to $2-million sales range, due to a decline in marketing sales and a rise in farm supply sales. This group also included five cooperatives that handled only farm machinery, equipment, and hardware.

Table 2—Machinery sales as a percentage of total cooperative sales for cooperative farm machinery dealers in 1980

Range in machinery sales	Number of co-ops	Machinery sales		All sales		Mach. sales as percent of total
		Total	Average	Total	Average	
Million dollars		*- - - - - 1,000 dollars - - - - -*				
More than 3	11	47,308	4,301	218,686	19,880	22
2 to 3	11	24,820	2,256	105,986	9,635	23
1 to 2	15	22,005	1,467	175,097	11,673	13
Less than 1	19	11,490	605	125,950	6,628	9
Total	56	105,623	—	625,719	—	17
Average	—	—	1,886	—	11,173	—

—Not applicable

The 15 cooperatives with machinery sales between $1 million and $2 million represented smaller machinery sales and greater total sales than larger cooperatives. Only 13 percent of their total sales, or $22 million, were devoted to farm machinery.

The 19 smaller cooperatives, averaging less than $1 million in machinery sales, were about equally divided among marketing, supply, and combination supply/marketing cooperatives. Their average machinery sales were $605,000, or 9 percent of total sales of $6.6 million in 1980.

Net Margins for Machinery and Total Cooperative Operations

Net Margins of Cooperative Dealers Net margins of $3.1 million on machinery sales of $105.6 million equaled 2.9 percent for cooperative dealers in 1980. Net margins included other income from machinery operations, such as interest earned on accounts and volume discounts from the manufacturer.

The average cooperative dealer earned $54,894 on average sales of $1.9 million, for a 2.9-percent return. In 1970, the average cooperative dealer, of 70 reporting margins, earned $12,289 on average sales of $409,643 and realized a 3-percent return.

In 1980, larger cooperative dealers had average net margins of $170,000 on average sales of $4.7 million. This equaled a 4-percent return on machinery sales (table 3). Their net margins ranged from $37,000 to $395,000. These

Table 3—Net margins as a percentage of farm machinery sales of cooperative farm machinery dealers in 1980

Range in machinery sales	Number of co-ops	Total machinery sales	Average machinery sales	Total net margins	Average net margins	Percent of sales
Million dollars			*- - - - - 1,000 dollars - - - - -*			
More than 3	11	47,308	4,301	1,868	170	4.0
2 to 3	11	24,820	2,256	501	46	2.0
1 to 2	15	22,005	1,467	403	27	1.8
Less than 1	19	11,490	605	302	16	2.6
Total	56	105,623	—	3,074	—	2.9
Average	—	—	1,886	—	55	—

— Not applicable

higher margins reflect the importance of sales volume to higher earnings. Size alone does not guarantee high earnings. Coupled with good management practices, though, it practically assured successful machinery operations.

Net Losses of Cooperative Dealers Ten of the 56 cooperative dealers reported net losses in farm machinery operations—ranging from $2,000 to $115,000 in 1980. Most of these losses were by cooperatives with machinery sales in the range of $1 million to $3 million, causing a sharp drop in their average net margins. In some cases, losses occurred not only in machinery operations but in total cooperative operations. Boards of directors had made some management changes in 1979 and 1980, but with little apparent success. Some had experienced a gradual decline in sales volume, while expenses remained high and/or were increasing. While management decisions appear to be an important factor contributing to losses in 1980, other unforeseen events generally were the prime cause.

Some managers indicated machinery sales in the range of $1.5 million to $2.5 million should be adequate to realize net margins on operations. Otherwise, internal operating inefficiencies may be the real problems causing net losses, they said.

Machinery expenses for cooperative dealers showing net losses in 1980 averaged more than 25 percent, with some exceeding 30 percent of sales. This is nearly double the average expenses (14.89 percent) for noncooperative dealers reporting 1980 operations to their trade association, National Farm and Power Equipment Dealers Association in St. Louis.

On the other hand, many cooperative dealers experienced increasing sales and successful operations until the midseventies. When sales slowed and expenses continued to increase, some dealers failed to readjust operations to balance costs with sales. Some cooperatives managed to absorb machinery losses, while successful dealers expanded the sales force and facilities to increase volume and operate more efficiently.

Cooperative Margins vs. Farm Machinery Margins Although machinery departments earned less than other departments of cooperatives in 1970, the situation had been reversed by 1980. Cooperatives franchising machinery averaged a 2.2-percent return on total sales, including supply and marketing. Machinery departments, on the other hand, averaged a 0.7-percent greater return on sales than total cooperative operations.

Larger cooperatives earned average margins of 2.5 percent on total sales, while larger cooperative machinery dealers' sales earned 4 percent

(table 4). Margins for larger cooperatives were slightly above average for 1980, but margins for larger cooperative machinery dealers exceeded that of the average cooperative by 1.5 percent.

Cooperative dealers with machinery sales in the range of $2 million to $3 million did not fare as well in net margins earned as larger machinery dealers—only 2 percent on sales. However, the 2-percent margin exceeded total cooperative margins in the same sales range of 1.8 percent.

Among cooperatives with sales ranging from $1 million to $2 million, machinery dealer operations fell below total cooperative operations in net margins, 1.8 percent to 2.2 percent of sales. Smaller cooperative machinery dealer operations, with average sales volume of less than $1 million, regained the edge over total cooperative operations in the same sales range, 2.6 percent to 2 percent of net margins on sales.

Cooperative dealers of different sizes operated under varying degrees of autonomy. Smaller cooperative dealers generally made up a larger part of total supply operations, and machinery management was encouraged to meet competition on a smaller scale. Net margins were smaller for cooperative dealers with sales of $1 million to $3 million, as machinery sales were a smaller part of marketing volume operations and machinery managers generally operated under more restrictive guidelines than those of smaller supply cooperatives. Although a part of large marketing cooperatives, larger machinery dealers could act almost independently of other cooperative operations. They could compete on equal or better terms with their noncooperative competitors—generally providing full services from modern and efficient facilities.

Table 4—Average net margins in farm machinery and total cooperative operations in 1980

Range in machinery sales	Average machinery sales	Average net margins	Percent of sales	Average co-op sales	Average net margins	Percent of sales
Million dollars	*- - - 1,000 dollars - - -*			*- - - 1,000 dollars - - -*		
More than 3	4,301	170	4.0	19,880	498	2.5
2 to 3	2,256	46	2.0	9,635	177	1.8
1 to 2	1,467	27	1.8	11,673	258	2.2
Less than 1	605	16	2.6	6,628	129	2.0
Average	1,886	55	2.9	11,173	246	2.2

No-till drill in operation seeding winter wheat in stubble

Field chopping corn for delivery to silo or bunk feeder

COMPARISON OF DEALER PERFORMANCE

Operations

Average performance and operating efficiency of cooperative machinery dealers have improved since 1970 and were practically the same as that of noncooperative dealers providing operating data to their association in 1980. But because operating efficiency is enhanced by a larger sales volume, the average noncooperative dealer may have a slight edge in performance (figure 1). Cooperative dealers, with average sales of $1.89 million, may be at some disadvantage to their noncooperative competitors, with average sales of $2.25 million.

Percent of average new and used equipment and repair parts sales for cooperative dealers were somewhat greater than those of noncooperative dealers. Percent of service labor and other lines also averaged higher for noncooperative dealers (table 5).

Table 5—Average operating performance of cooperative and noncooperative farm machinery dealers, 1980

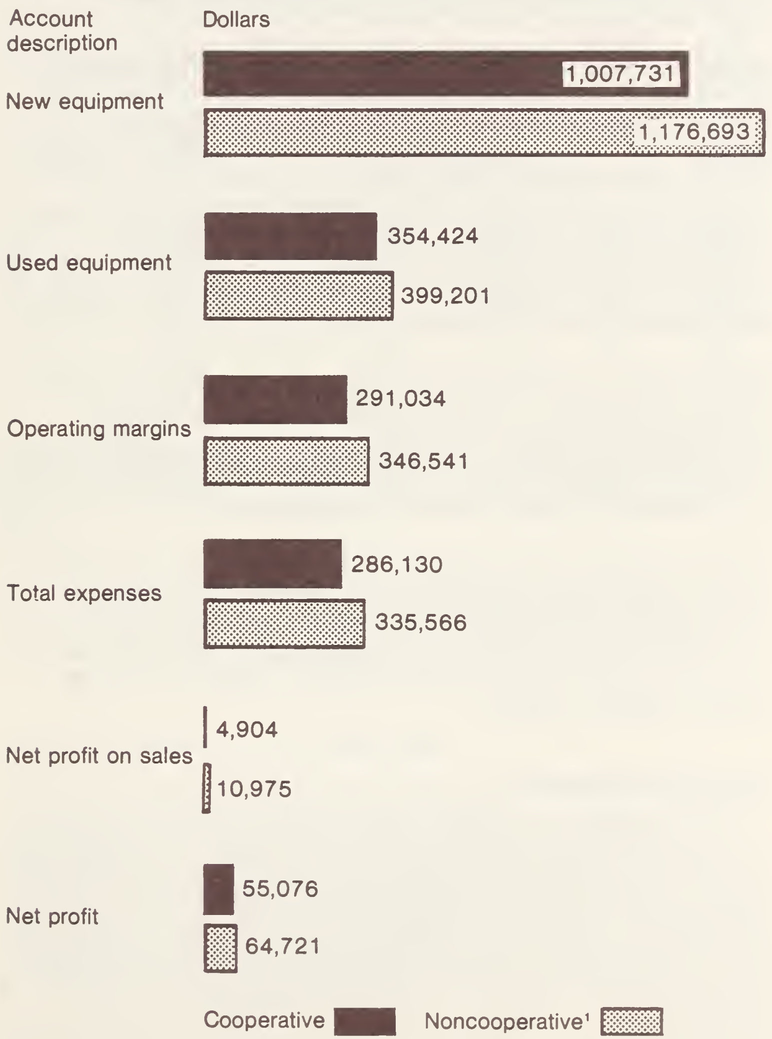
Account description	Cooperative		Noncooperative[1]	
	Dollars	*Percent*[2]	*Dollars*	*Percent*
Sales:				
New equipment	1,007,731	53.43	1,176,693	52.24
Used equipment	354,424	18.19	399,201	17.72
Repair parts	348,071	18.45	395,027	17.54
Service labor	100,409	5.32	149,875	6.66
Other lines	75,523	4.01	131,510	5.84
Total	1,886,159	100.00	2,252,306	100.00
Margins and expenses:				
Operating margins	291,034	15.43	346,541	15.39
Total expenses	286,130	15.17	335,566	14.89
Net margins/profit:				
Net margins on sales	4,904	0.26	10,975	0.49
Other income	50,172	2.66	53,746	2.38
Net margins/profit	55,076	2.92	64,721	2.87

[1]National Farm and Power Equipment Dealers Association, St. Louis, Missouri, 1980 Survey of Operations.

[2]See preface for survey methodology.

Figure 1

Average Operating Performance of Cooperative and Noncooperative Farm Machinery Dealers, 1980



[1] National Farm and Power Equipment Dealers Association, St. Louis, Missouri, 1980 Survey of Operations.

Operating margins were somewhat greater at 15.43 percent of sales for cooperative dealers, compared with 15.39 for noncooperative dealers. Total expenses also were slightly higher at 15.17 percent of sales for cooperative dealers, compared with 14.89 percent for noncooperative dealers.

Both dollar amount and percent of net margins on sales averaged greater for noncooperative dealers in 1980. Percent of other income was greater for cooperative dealers—which may be due to accounting procedures. However, this led to a slightly greater percent of net margins, 2.92 percent for the average cooperative dealer and 2.87 percent for the average noncooperative dealer in 1980. Net margins of 4 percent earned by larger cooperative dealers also exceeded the 3.8 percent earned by larger noncooperative dealers replying to the survey by the national association of noncooperative dealers. Smaller dealers averaged margins 1.1 percent higher than those of smaller noncooperative machinery dealers in 1980.

Nearly half the cooperative dealers operating in 1970 had discontinued machinery operations by 1980—though these cooperatives generally continued other operations. Thus, many smaller and less efficient cooperative dealers went out of business and did not contribute to lowering the operating efficiency of stronger cooperatives in 1980.

Unlike cooperatives with other business that can continue to operate after they drop their farm machinery line, noncooperative dealers must try to weather greater costs and less demand to stay in business. Cooperative dealers should continue to lower operating expenses—because many still exceed the average of noncooperative machinery dealers—particularly smaller cooperative dealers.

Sales Per Employee

Another indication of cooperative performance is total sales per employee. It is not exact for any cooperative, due to the diversified activities and varied sales of supplies and products marketed by cooperative machinery dealers. For cooperatives engaged primarily in grain marketing, sales per employee are usually greater than comparable sales volumes in table 6. On the other hand, for cooperatives retailing production inputs, such as farm supplies, sales per employee normally are less than comparable sales volumes in table 6.

Cooperative dealers' machinery sales per employee in 1980 were $160,521, or $4,363 less than noncooperative sales per employee of $164,884.

Table 6—Total machinery and total cooperative sales per employee for cooperative farm machinery dealers in 1980

Range in machinery sales	Farm machinery			Total volume		
	Average sales	Average number of employees	Sales per employee	Average sales	Average number of employees	Sales per employee
Million dollars	*1,000 dollars*		*- - 1,000 dollars - -*			*1,000 dollars*
More than 3	4,301	21	203	19,880	67	294
2 to 3	2,256	13	169	9,635	34	283
1 to 2	1,467	11	130	11,673	42	279
Less than 1	605	6	105	6,628	28	237
Average	1,886	12	161	11,173	41	273

Larger cooperative dealers had about the same average machinery sales per employee as larger noncooperative dealers—$203,075 per employee for cooperative and $203,004 per employee for noncooperative machinery dealers.

Only cooperatives with machinery sales of less than $1 million and cooperative sales of $6.6 million averaged total sales per employee less than the average of $272,920 in total sales for the 56 cooperatives in 1980.

Dealer Competition in the Trade Area

As some machinery dealers increased in size, smaller dealers were forced to leave the industry. This is evident from the change in cooperative dealer operation between 1970 and 1980. In 1970, 101 cooperatives were franchising farm machinery for major machinery manufacturers, but 10 years later, 45 cooperatives had discontinued these operations. In 1970, the largest sales volume category was more than $1 million and the smallest less than $200,000. In 1980, the largest machinery sales volume category was more than $3 million and the smallest less than $1 million (table 7).

Number of machinery dealers competing in the same town declined from an average of four in 1970 to two in 1980. In the trade area, the number was reduced from an average of nine in 1970 to seven in 1980. Total number of

all dealers, both cooperative and noncooperative, competing with the average cooperative dealer fell from 13 in 1970 to 9 in 1980. Thus, many noncooperative as well as cooperative machinery dealers discontinued farm machinery operations from 1970 to 1980. The decline in dealer competition was greatest in the trade areas of larger cooperative dealers.

Here, the average cooperative dealer had only one competitor in the same town and five more in the 20-mile trade area. In 1970, 14 dealers, both cooperative and noncooperative, were competing with large cooperative dealers and in 1980, only 6.

Dealer competition was greatest for cooperative dealers with sales from $1 million to $2 million. Twelve other dealers, both cooperative and noncooperative, were competing with the average cooperative dealer in both 1970 and 1980. Dealers in this sales range are large enough to operate profitably and are more likely to continue operations.

Sales Concentration in the Trade Area

Larger cooperative dealers averaged 44 percent of sales within a 10-mile radius, the highest proportion for any size group of dealers in 1980. They also had the highest percent of sales in the trade area greater than 20-miles from headquarters (table 8).

The sales share of larger cooperative dealers within the 10-mile radius rose from 25 percent in 1970 to 44 percent in 1980, reflecting the drop in competing noncooperative dealers from five in 1970 to one in 1980. Against only one competitor, larger cooperative dealers could sharply increase sales volume in the 10-mile trade area.

Concentration of 52 percent of sales within a 10- to 20-mile radius by cooperative dealers with $1 million to $2 million in sales volume reflects the heavy competition from nine other machinery dealers in the same area (table 7).

While the average number of noncooperative machinery dealers competing with cooperative dealers declined from 13 in 1970 to 9 in 1980, cooperative dealers increased the percent of sales outside the 20-mile radius from 19 percent in 1970 to 22 percent in 1980. The greatest increase was by smaller cooperative dealers who made 21 percent of their sales in 1980 outside the 20-mile radius, compared with only 8 percent in 1970. This shows increasing competition in outlying areas and a trend to larger, more distant sales areas.

Table 7—Average number of noncooperative farm machinery dealers competing with cooperative dealers in 1970[1] and 1980, by sales volume

Range in machinery sales[1]	Noncooperative machinery dealers					
	In same town		In trade area		Total	
	1980	1970	1980	1970	1980	1970
Million dollars			*Number*			
More than 3	1	5	5	9	6	14
2 to 3	2	4	7	8	9	12
1 to 2	3	4	9	8	12	12
Less than 1	2	3	8	10	10	13
Average	2	4	7	9	9	13

[1]Sales volume not equal for 1970 and 1980, but sales categories are comparable.

Table 8—Volume of farm machinery sales related to size of trade area, 1970 and 1980

Range in machinery sales	Percent of dealer sales					
	Less than 10 miles		10 to 20 miles		More than 20 miles	
	1980	1970	1980	1970	1980	1970
Million dollars			*Percent*			
More than 3	44	25	29	47	27	28
2 to 3	42	46	39	36	18	18
1 to 2	28	45	52	32	20	23
Less than 1	36	46	43	46	21	8
Average	38	41	41	40	22	19

Machinery Repair and Services

The ability of cooperative dealers to provide services members need and the quality of services is an indication of dealer performance. "We're ready to service the machinery we sell" is how managers explain their success.

Service performance may be observed in farm machinery repair both in the shop and on the farm, availability of over-the-counter replacement parts,

A four-wheel farm tractor - 200 + H.P. 1980

and timeliness of service. Most cooperative dealers realize the cost of machinery "down time" to farmers during the busy season of planting or harvesting. A day's cost can mount quickly to a week's loss, if a storm hits during grain harvest and the combine breaks down and cannot be readily repaired.

Most cooperative dealers will hire the employees needed to keep machinery running for their patrons (table 9). Larger cooperative dealers in 1980 employed an average of 7 shop mechanics, 3 parts employees, and 3 field employees, for a total of 13 service employees. Smaller dealers averaged three shop mechanics, one parts employee, and two field employees, for a total of six.

The average cooperative dealer had five shop mechanics, two parts employees, and two field employees, for a total of nine service employees in 1980. With a salesperson, an office employee, and the manager added, each cooperative dealer averaged 12 machinery employees in 1980.

Since 1980, machinery repair and service on farms has increased by 100 percent, partly due to fewer machinery dealers and the greater distance of farmers from dealerships. To take repair trucks to farms becomes more economical than to have farmers transport machinery some distance to cooperatives for general repair.

Whether cooperatives give better service than noncooperatives lies in farmers' satisfaction, which is difficult to measure. However, to the extent that members own the cooperative business and have a voice in its operations, cooperative managment is encouraged to give the best service to all farmer-members.

Table 9—Average number of shop and service employees of cooperative farm machinery dealers in 1980, by sales volume

Range in machinery sales	Co-ops	Shop mechanics	Parts personnel	Field personnel	Total service employees
Million dollars			*Number*		
More than 3	11	7	3	3	13
2 to 3	11	6	2	2	10
1 to 2	15	5	2	1	8
Less than 1	19	3	1	2	6
Average	—	5	2	2	9

PROBLEMS IN COOPERATIVE MACHINERY OPERATIONS

Cooperatives handling farm machinery continued to have operating problems. Some problems were internal, some external and inherent in the industry, and some due to adverse economic conditions of the late 1970's.

Increasing operating costs affect cooperative and noncooperative machinery dealers alike. Increasing cost had more serious consequences for low-volume dealers—those with less than $1 million in sales—and even those with as much as $2 million in sales. Generally, these dealers lack the resources to expand and modernize facilities and increase volume to compete with more progressive dealers.

Internal Operating Problems

Half of cooperative machinery managers listed four areas of internal operation as sources of major problems in 1980. Almost the same proportion cited these areas as posing minor problems. The areas in order of frequency were: hiring good employees, acquiring capital, financing sales, and managing inventories. With the problem of making reasonable trades, they made up the top five operating problems of 1980.

Nearly two-thirds of cooperative dealers completing the survey checked a major or minor internal operating problem, while one-third reported no internal problem in farm machinery operations in 1980 (table 10).

Four of the top five operating problems of 1980 (table 10) were among the top four operating problems of 1970: hiring employees, acquiring capital, managing inventories, and making reasonable trades. Only sales financing was new and different for 1980.

Another change from 1970, reported by more than half the managers, was the increasing problem of handling employees. In 1970, facility location and size were more important problems and handling employees was not even mentioned. A decade later, managers' comments on the difficulty of handling employees ranged from reluctance to accept authority to low productivity and poor-quality work habits.

Hiring employees, however, was a major problem in both 1970 and 1980. Only four dealers stated it was not a problem. Apparently cooperative management needs to put more emphasis on guidelines for hiring better employees and/or raise pay scales to be fully competitive with other businesses.

Table 10—Internal operating problems of cooperative farm machinery dealers, 1980

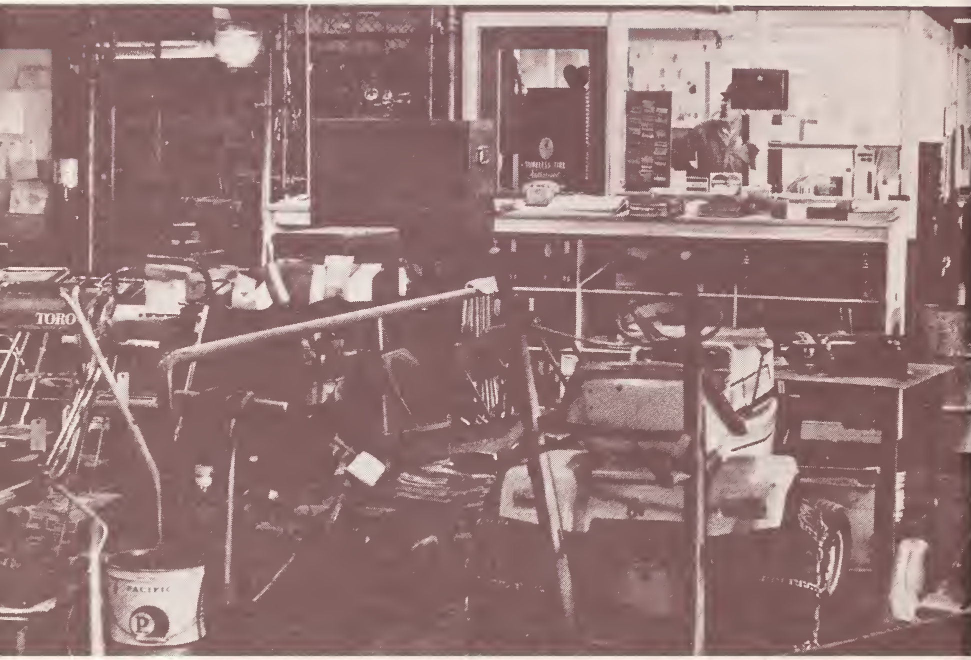
Internal problems	Co-ops reporting problems			
	Major	Minor	None	Total
	Number			
Hiring employees	18	26	4	48
Acquiring capital	10	18	20	48
Financing sales	10	24	14	48
Managing inventories	8	34	6	48
Making reasonable trades	6	26	16	48
Keeping good employees	6	22	20	48
Handling employees	6	22	20	48
Location of facility	6	22	20	48
Size of facility	6	18	24	48
Size of operation	6	14	28	48
Total	82	226	172	480
Percent of total	17	47	36	100

Acquiring capital was one of the bigger problems, as it was in 1970. High interest rates added to the problem in 1980 and made boards of directors more reluctant to approve borrowed capital to improve or expand machinery operations.

Controlling inventory was a problem in 1970 as well as in 1980. Repairing farmers' machinery always has been high on the cooperative dealers' list, so the tendency was to overstock repair parts to have them on hand when needed. With larger dealers moving to ordering parts by computer, the heavy and costly inventory problem can be limited.

Trade-in allowance, reconditioning, and sale of used machinery are continuing problems. Some cooperative dealers have solved the problem partially by selling used machinery in bulk to dealers in another area or State where used machinery sales are more likely. The problem was not as acute in 1980, as low farm prices and high machinery prices favored a better used-machinery market.

Lawn and garden repair shop of a cooperative dealer



Farm machinery repair shop of a cooperative machinery dealer

External Operating Problems

External problems were more troublesome for cooperative dealers than internal ones, and all cooperative dealers reported some external problems in operation. Most considered price cutting by competitors as the most troublesome problem. Major problems ranged from the greatest, meeting dealer competition in pricing, to the least troublesome, meeting dealer competition in service (table 11).

Many operating problems resulted from depressed economic conditions in the late 1970's for grain and general farmers, causing weakened demand for new machinery and both dealer and manufacturer financial problems. The late seventies also were unstable times for some major manufacturers of farm machinery. Two large companies suffered serious losses, another was sold, and a fourth merged some operations with a European manufacturer. Machinery manufacturers, squeezed for operating capital, changed floor plans and required earlier and higher term payments from franchise dealers.

Adjusting to operational changes in the trade area and maintaining an approved dealer franchise added financial burdens to some already pressed and financially troubled cooperatives as well as noncooperative machinery dealers. This partially explains why more cooperative dealers went out of business from 1975 to 1980 than any other period to date.

Table 11—External operating problems of cooperative farm machinery, dealers 1980

External problems	Co-ops reporting problems			
	Major	Minor	None	Total
	Number			
Meeting dealer competition in pricing	26	22	0	48
Adjusting to change in trade area	12	30	6	48
Helping farmers obtain financing	10	28	10	48
Maintaining approved dealer franchise	8	22	18	48
Meeting dealer competition in service	6	14	28	48
Total	62	116	62	240
Percent of total	26	48	26	100

Operating Problems in 1980

Cooperative dealers and managers were asked to rate operating problems as major, minor, or no problem. Managers also were asked to discuss specific operating problems in 1980.

High Interest Rates Managers listed high interest rates as the biggest operating problem during 1980. A number said if interest rates stay at 20 percent for any length of time, they would have to close their doors. Every phase of machinery operations was affected by interest costs, and there was no way to alleviate or bypass the problem, they said. Farmers, cooperatives, and manufacturers all had the same problem. Coupled with high inflation, they added, some of each group would be forced out of business.

Price Cutting The operating problem second in importance was price discounting to make a sale. Price shaving, price cutting, long-term payments, and even selling below cost were necessary for some machinery dealers to remain in operation. Managers said some dealers could not afford to sell below cost, but others could not afford not to. Operating capital for some was so pressing that unheard of deals were made. For some dealers, cooperative or not, it was a matter of business survival. In fact, 11 cooperatives discontinued farm machinery operations during 1979-1980.

Uncoordinated Management Cooperative machinery officials interviewed were nearly unanimous in suggesting uncoordinated management led to unprofitable operations. The cause, they agreed, generally was a breakdown in communications between levels of management—from the board to department managers. This can happen in several ways:

(1) one level of management assuming more than a generally accepted share of authority,

(2) new and/or inexperienced managers unfamiliar with total cooperative operations,

(3) little or no delegation of authority and/or not taking into account differences in departmental operations or ability of each department manager, or

(4) failing to motivate or be motivated to assume responsibility.

Other operating problems listed by managers included personnel, credit, manufacturer strikes, and high factory prices. None of these problems, however, was mentioned as frequently as the three most serious ones.

FAILURE OF MACHINERY OPERATIONS

It is no longer true only small and weak cooperatives discontinue machinery operations. Before 1980, two of the larger farm machinery cooperatives dropped this service to farmers. Since 1980, two more cooperatives with machinery sales greater than $3 million have been concerned seriously about continuing machinery operations. What are the reasons some fail and others succeed, when all experience similar economic conditions? What are the pitfalls of operation leading to failure of farm machinery operations?

Changing economic conditions, particularly inflation and high interest rates, were deciding factors in causing smaller cooperative farm machinery operations to fail. In some cases, however, these may have been the final pitfalls after an accumulation of operating errors. Comments by many farm machinery experts on this subject led to a case study of four cooperative dealer failures to determine the causes.

Case Studies

Case One A large cooperative built new machinery facilities several miles from other cooperative operations in 1970. By 1975, machinery sales had increased to $3 million. By 1980, after several losing years, cooperative machinery was discontinued. While too rapid expansion may have been a contributing factor, it was not the main reason for closing the operation and leasing the facility to a noncooperative dealer.

The former general manager had little interest in farm machinery and seemed pleased when the department moved out of town. He gave the department a blank check on purchasing needs but failed to communicate operations and budget requirements for profitable operations. So, the department was operating in the dark when it came to balancing costs and sales.

The main reason the cooperative went out of the machinery business was what the present general manager called "a breakdown in cooperative management"—a lack of communication between the former general manager and the machinery department manager. Both were operating without approved plans and operating facts to justify decisionmaking. While each was competent in his field, neither shared nor understood the total machinery operation.

The current general manager plans to put the cooperative back in farm machinery by the end of the 2-year lease period. He is convinced the cooperative farm machinery business can be operated successfully.

Case Two A similar case, but emphasizing a failure in judgment, was evident at another large cooperative machinery operation. The experienced machinery manager was dismissed when the new general manager—without machinery experience—came on board. After 2 years of heavy losses in farm machinery, the machinery manager was rehired—but with reduced authority to operate his department.

Lacking machinery sales experience, the general manager looked on machinery as just another department of the cooperative. Perhaps if the machinery manager had been given appropriate authority to operate the department originally or after he was rehired, losses may have been reduced or even eliminated. However, failure by the general manager and/or the board of directors to coordinate management authority may have contributed to the eventual and complete closedown of machinery operations—less than 2 years after the machinery manager was rehired.

Another factor was important in the final closing of the department. A nearby cooperative franchising the same make of farm machinery was aggressive in competing for machinery sales in the area. Under coordinated management, this cooperative acquired new customers through competitive sales and by efficiently repairing and leasing farm equipment. This cooperative was able to hold on to new machinery patrons acquired from the other cooperative, even before it closed the doors.

Case Three Management problems and poor operating facilities combined to lower sales, promote inefficiency, and prevent profitable machinery operations in this cooperative. Finally, it discontinued machinery operations in 1978. During the struggle to handle farm machinery successfully, the cooperative employed several managers. Generally without machinery experience, they seemed to be more concerned with grain marketing and feed and fertilizer sales, potentially more profitable operations, while the machinery manager struggled to keep the department going.

Little evidence exists to indicate external factors such as intense competition caused machinery sales problems at the cooperative. The machinery manager attributed problems to internal operations—operating out of three nearby buildings with not enough supervision or direction from cooperative management. Perhaps if the board had appeared interested in expanding operations and facilities and hiring machinery-oriented general managers, the machinery department may have survived.

Case Four In this cooperative, the machinery manager not only worked in concert with the general manager but tried to coordinate operations with the regional cooperative. When the regional took over operations of the local, farm machinery was a vital part of the local. So, the regional invested capital in new facilities to expand operations. Machinery sales increased form $2 million in 1975 to $3 million in 1979. Since 1980, sales have fallen, and with the added financial burden of paying off capital improvements, management is concerned the machinery department cannot meet financial obligations. So, the cooperative has asked the manufacturer to find a dealer to take over the machinery franchise.

Case Study Summary

In the survey of machinery cooperatives for this study, managers reported discontinued machinery operations due to continued losses. Some mentioned high interest rates, declining sales, high costs, and inefficient operations as causes of operating losses.

One manager referred to a "breakdown in management"—a failure to communicate successfully between or through the levels of authority in cooperative management. Their combined opinion seems to point to uncoordinated management, beginning years before operations ceased, as the underlying cause of continued machinery losses—resulting eventually in cooperative dealer failure.

Agricultural Cooperative Service provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents obtain supplies and services at lower costs and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

The agency publishes research and educational materials, and issues *Farmer Cooperatives.* All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, or national origin.